

# THE SCHOOL JOURNAL

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The business department of THE JOURNAL is on page 198.

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TATE SUPT. DRAPER has won a large number of friends by the enlightened manner in which he has discharged the duties of his office; the six years he has been in office have borne rich results. He aimed, from the beginning, squarely at the teachers; if he had selected for his motto, As the teachers of the state, so the schools of the state, he could hardly have acted in a different manner. One of the great reasons the friends of education (irrespective of party) desired his retention in office was that he might develop more fully the large measures he had conceived for putting teaching in New York state on a professional basis. He retires from office with the strongest respect possible of the teachers and school officers of the state.

Mr. Draper's retirement necessarily involves that of his able deputy, Hon. Charles R. Skinner; a man who, in season and out of season, has met the numerous drafts THE JOURNAL has had to make upon the department with a promptitude and courtesy that has always evoked praise. Mr. Skinner is an able writer as well as an efficient executive officer, who has solved the problems presented to him in a satisfactory way. He has the good wishes of every one who has been brought into contact with him.

The election of Superintendent James F. Crooker, of Buffalo, to succeed Hon. Andrew S. Draper as superintendent of Public Instruction in the state of New York, does not warrant any suggestion of a retrograde movement in the management of the schools. Mr. Crooker approves of every forward step that has been taken during the past six years in the management of the schools. Having spent his life in the school-room he will come to the heavy work that is before him with a practical enlightenment on ways and means by which the schools may be improved.

The report of the superintendents' meeting held at Brooklyn this week, will appear in next week's issue. Owing to this, the Primary edition of THE JOURNAL will not appear till March 5. After this the Primary number will appear on the first Saturday of each month, instead of the last Saturday as heretofore.

"I can do everything but govern," said a teacher at an institute in Tarrytown. When this was reported to Commissioner Sanford, he said: "That is a mistake; she has book knowledge and she can ask questions and compare the answer with the one in her mind or in the book, but I doubt whether she can teach, as I understand the word."

This statement led the group to debate the point.

The government, or control, of the pupil comes from a comprehension of the pupil from a higher standpoint. It is true that in many cases the higher standpoint sought is merely that of physical power—the same that is sought in the prize ring. It is also true that the best teachers never consider this at all. Does the president of a college when he has a class in moral philosophy before him ever think that he is able to take a student by the neck and throw him down stairs?

The teacher who wants to govern well must get on higher ground,—higher intellectual, higher moral, higher spiritual ground. We readily come under the sway of higher natures; we rejoice to do so; so it is with children. The one who has a difficulty in governing is not yet at peace with herself. The subject is too large to be disposed of in a few lines; but the general truth is stated above.

One of the best plans for higher education was made some years ago by Dr. Thomas Hunter, the eminent president of the Normal college in New York city. The special point made was that a republic, especially, needs men of large culture for its leaders; that its safety and continuance require that it shall have educated men for leaders.

Every few days there are published in the newspapers, the words of men who have been brought into prominence by the machinery of the election. When they stand on their feet and begin to talk, then the kind of men they are is plainly seen. At a late convention, it was a governor who attempted to set forth his ways of remedying the hard times that farmers complain of. He said:

"Thirty years ago the wealth of this nation was much more fairly distributed than it is to-day. Then one could almost count upon his finger ends those who could rightfully be termed millionaires. Now they are numbered by thousands. If conditions remain unchanged through the life of another generation who can fix the multiple that will foretell their numbers then? Can a few men absorb the wealth of this nation and leave the masses independent? Do not let us be deceived. For every immensely rich man there must from necessity alone be many wretchedly poor. All wealth is the product of labor. Great fortunes simply represent the earnings of great numbers. No one man can perform the labor requisite to produce them. They can only be acquired by an individual through the aid of some process that enables him to appropriate that which many produce."

Now here are statements that show the speaker is not qualified as a leader. This cry, "You've got more than I" (begun in the nursery), naturally attracts sympathy; few of us have as much as we desire. But that Jay Gould has millions does not cause others to be wretchedly poor. This socialistic cry, "Some one has more than I," was one of the causes of the downfall of great Rome. There are men using it now for political purposes; it may enable them to accomplish their ends, but it will do a great deal more; it will make ignorant people uneasy.

No attempt is made here to answer the statements above—the point is that, as there will be men to utter

them, there must be educated leaders to point out the fallacies involved and keep the people off the rocks of national disaster. There are strong reasons in republics for the existence of high schools and colleges.

The election of a state superintendent of the public schools of the state of New York occurs once in three years. The present incumbent, Hon. Andrew S. Draper, has held office for six years. He was nominated for a third term by the Republicans. James F. Crooker, of Buffalo, was nominated by the Democrats. On the 10th of February, on joint ballot, the latter was elected by a majority of 10 votes; the votes being,—Crooker, 81; Draper, 71.

This is a brief statement of a really momentous event that took place in the Assembly chamber on Wednesday last. It had been conceded, since the middle of January, that a Democrat would be chosen for that position. Up to that time there were many who believed that the ability Mr. Draper had displayed would ensure his retention as the head of the public school interests of New York. The political lines are apparently drawn with a tightness never known before.

At twelve o'clock the senators came in, two by two, and took their seats in the center of the Assembly chamber. As each name was called the member advanced and voted; there were only two candidates, Andrew S. Draper and James F. Crooker. The friends of each earnestly watched the movements; several school commissioners had been drawn in from their counties. The counting of the votes took but a few moments, and the result was 71 for Mr. Draper, 81 for Mr. Crooker. The election of a member of the Board of Regents attracted no attention. Rev. William C. Doane, of Albany, was unanimously chosen. This office is so nearly an honorary one that it attracts no competition. Practically the Board of Regents consists of Melvil Dewey, the secretary, and a good secretary he is too.

Mr. James F. Crooker is well spoken of by Buffalo men. He has been superintendent of the schools of that city for the past twelve years. He takes charge of a business that has been got into fine running order, but there is much more to be done. We are not the same people we were when the office of state superintendent was created nearly forty years ago; the state is not the same. The great capitol is an exponent of a great change that has been going on. I well remember the election of Victor M. Rice in the old capitol building (by the way he too was superintendent of the schools of Buffalo). That was a step that gave a great impulse to the school system: new normal schools were established; the teachers' institutes were expanded; school commissioners elected; uniform examinations maintained; training classes brought under the control of the department; the schools made entirely free. After enumerating all these things it may seem that there will be no educational worlds for Mr. Crooker to conquer, but we beg him not to give way to that illusion. The situation is to be likened to gathering munitions of war; there has been some skirmishing, but there is yet preparation needed for a grand combined movement on the ranks of ignorance in the Empire state.

I paid a visit to the Albany normal school, my old Alma Mater; it has become a state normal college. No informational subjects are pursued. The pupil must have obtained enough arithmetic, geography, grammar, etc.,

at some high school, normal school, or college. President William J. Milne has to move the college in a field quite advanced beyond that the old school occupied. The student of the school spent a few weeks on "Page's Theory and Practice," and two weeks in the practice school, and he had it all; now two years are spent in the theory and practice of teaching. In mentioning this to an old graduate he naively remarked: "I don't see how they could find enough to spend their time on." His educational library probably consists of "Page's Theory and Practice;" he thinks that book has all there is to be said about teaching.

It is rather remarkable that the new building planned by Principal Waterbury should exhibit so many defects; it seems to cover space enough and yet is so badly divided that some extensive alterations will be needed at no remote day to fit it for practical use. The immense window (about which a good deal has been said) will soon be completed. Prof. Husted is there yet, a connecting link for the glorious past of the school with the expanding and promising future.

A. M. K.

Albany, Feb. 10.

## How to Learn to Study Children. I.

(Copyrighted, 1892.)

By N. A. CALKINS, LL. D., New York City.

The doing of the same thing may be easy or difficult; easy when done in the right way, but difficult when done in the wrong way. Knowing what should be taught to a pupil is a great attainment for the teacher. Knowing how to teach the pupil is the high art of teaching. Both of these attainments must be acquired by the teacher to ensure success in his work by the proper education of his pupils.

The teacher must know, in order to teach intelligently, not only *what* the child knows about the subject of the lesson, but *how* the child knows it; whether he knows it by and through personal experience, or knows it as something told him, but without confirmation or comparison by actual observation, and hence knows it only as a matter of memory of words. The practice of *giving information* to pupils, and, if remembered by them, calling it education, without leading the pupils to associate and blend that information with their own experiences and their previous knowledge, is a delusion of the teacher and a pitfall to the pupils.

While it is generally conceded to be necessary that the teacher should ascertain *what* the child knows, pertaining to the given lesson, it is not generally understood, even by teachers, that it is equally important to ascertain *how the child knows* what he is supposed to have learned. Concerning this last matter, which is an exceedingly important element in intelligent teaching, a few suggestions, as to ways by which teachers may study children to learn how to teach them, may be helpful to such as have not already learned these ways by experience. This study may be commenced in connection with the ordinary lessons of school, but great care must be taken by the teacher to prevent failure in ascertaining *how the child knows*, by reason of giving most attention to *what the child knows*. The teacher must fix his mind upon discovering whether the mental activities of the child have been so developed as to act readily through each of the senses. The observations for this

purpose should be made from day to day during the class exercises; and so conducted as to enable the watchful teacher to discover the chief ways by which the child learns. In doing this, it may be necessary to test the child's ways of learning by means of different subjects, in order to know whether that which he knows is merely *verbal*, or whether it is the result of personal experience.

Observations to ascertain whether the child perceives *likeness* or *unlikeness*, in two or more objects, is a good starting point for determining whether the child learns through his senses, or chiefly by the memory of words. And further, it is very desirable to ascertain whether the child notices only general resemblance and difference, or whether he carefully observes particular likeness and difference in objects.

The teacher may begin these observations by placing before the pupil two or more pieces of paper of different shapes, and two or three of each of the selected shapes, using for this purpose, square, oblong, and rhomb shapes. First, request the pupil to select two or more pieces of paper of the same shape, and note the result, *a*; request the pupil to point out the parts—as angles, sides—that are alike in each piece selected, with out naming them, *b*; then to count the parts that are alike, and tell the number, *c*; then to select two or more pieces of paper that are not alike in all their parts, *d*; then to point out the parts in these pieces that are not alike, and to count them, *e*; should the pieces of paper selected represent the *square* and the *oblong*, request the pupils to point out parts in one piece (as the long sides of the oblong) that are not like the parts in the other piece of paper, *f*; then point out parts in one (oblong) that are like parts in the other (square), *g*.

In making a record of the essential facts observed, in his note-book, the teacher may indicate the subject or special point to which his note relates by using, at the beginning of the respective notes, the letter which is affixed to the special observation to be made, as seen above.

The pupils may be requested to compare the parts of the *square* and the *rhomb*, in the manner above indicated; also the parts of the *oblong* and the *rhomboid*, and the teacher should note the results, as before. Afterward, different kinds of *triangles* may be compared and their points of likeness and of difference noted. During these early lessons in observing resemblances and differences in two or more objects, it is better not to require the pupils to use the *name* of the shape or object, lest the name, even, shall lead them to tell what they have *heard* in place of what they *see*. But the teacher may use the name of the shape, or object, when speaking of it, *after the pupils have shown that they notice* the special points of likeness and of difference in the forms.

The teacher must not forget that the purpose of these observations is to ascertain first *how the child learns*, in order to know *how to teach him*. Suppose it should be discovered, as is often the case, that the pupil could describe the parts of each shape, but could not readily point out their likeness and their difference, it would indicate that the pupil's knowledge of those shapes was only general and verbal; that he had not learned to observe and compare with sufficient care to acquire definite and real knowledge of that which his teacher supposed he knew.

This plan of careful observation and definite notice of

special points of resemblance, and of difference, should be continued, by the use of solids—comparing the *cube* and the *square prism*; the *square prism* and the *triangular prism*; the *prism* and the *cylinder*; the *cylinder* and the *cone*; the *cone* and the *pyramid*, etc. Careful notes should be kept, by the teacher, as to the defects of pupils in their ways of learning. These studies should be followed by the adaptation of special exercises that would tend to overcome the defects, and lead the pupils to learn in a natural and proper way through the appropriate senses.

It seems to be hardly necessary to state here that the plan proposed for ascertaining *how the child knows* that which he is supposed to have learned, is also adapted to the beginning of instruction in the study of objects. Such a plan of teaching would make the child's own observations and experience the foundation for whatever he might subsequently learn concerning that object, or subject.

Plans for studying the child to learn how to teach him other subjects will be given in subsequent articles.

## Studies in the History of Education. I.

By J. A. REINHART, Ph.D., Paterson, N. J.

*Preliminary Statement.*—In the year 1800, Pestalozzi, with three assistant teachers, was conducting an elementary school in Burgdorf castle, canton of Bern, in western Switzerland. This school attracted wide attention. Its fame spread beyond the land of Pestalozzi's birth, and drew visitors from far and near. A commission was appointed by a local "Society of the Friends of Education" to visit the school, and report upon its work. October 1, 1800, was the time, and the house of the Swiss minister of arts and sciences was the place of the reading of this report.

*What was said of the School and its Methods.*—The report stated that Pestalozzi's children learned to spell, read, write, and calculate quickly and well, arriving at results in ten months which the ordinary schoolmaster required three years to secure. The report continued: "It is true that schoolmasters are not generally men like Pestalozzi, nor do they find assistants like those of our friend, but it seems to us that this extraordinary progress depends not so much upon the teachers as upon the method of teaching.

"And what is this method? It is a method which simply follows the path of nature, or, in other words, which leads the child slowly, and by his own efforts, from sense-impressions. Another advantage of this method is that it does not unduly exalt the master, inasmuch as he never appears as a superior being, but like kindly nature lives and works with the children as his equals, seeming rather to learn with them than to teach them with authority."

### COMMENTARY.

What may we learn from this brief chapter in the history of education? In this school Pestalozzianism was alive and at work. It was blessed, evidently, with good reporters. We may look far and wide and not find a better account of Pestalozzianism than is given above. Let us draw out its wisdom and find its applications.

First. The personality of the teacher and his method co-operate. Many a good method has been set agoing in schools only to prove stale, flat, and unprofitable. The



spirit of the teacher must make live again the dry bones of the method.

"For forms of government, let fools contest,  
What's best administered is best,"

is as near to being true in teaching, as in government. Let us have both influences together—the charm of personality, and the power of a right method. Arnold, of Rugby, was not only a great man, but he was master of a true and effective method of teaching. Harper, of Chicago university, is not only a powerful man in his personality, in bearing, capacity for work, mingled kindness and severity, a veritable "driver" as we say, but he has elaborated to the minutest detail a wonderfully effective method of teaching. The truth under this head is, that every method is but an instrument, a machine. The power, the steam, the life of it, must come out of the personal character of him who uses it.

Secondly. We learn what the contemporaries of Pestalozzi and presumably what he himself held to be distinguishing marks of the "Method of Nature." What are these marks? The method of nature is slow. When shall we learn this great lesson? The best results in education are the slow products of oft-repeated efforts on the part of both child and teacher. How shall we illustrate this slowness? Let us suppose that a child of five years has been for two months in school. We propose to teach him for the first time to write and spell the word *play*. Many times must he be asked to look at it before he is allowed to name it. Many times must he be required to recognize and name it before he is permitted to copy it. Many times must he copy it before he shall be allowed to reproduce it on slate or paper, from his mental picture of it. Whence all this delay? Why should the process be so prolonged and slow? Simply this, that as a general rule the mental picture of a new word from which only he can reproduce it, is very slowly built up in the mind. Nature proceeds but slowly, along the path from sense-impressions to distinct and clear mental images.

Thirdly. The method of nature is that of self-effort. The words beginning with self are very important—self-denial, self-sacrifice, self-control, self-surrender. In education the great word is *self-activity*. It is not what the teacher does, but what the child does that educates him. To learn to do his work, to study absolutely without help or aid from others—this is the very first condition of clear and definite knowledge. What shall be our illustration here? In teaching with objects the number *ten*, we may ask, "Into what equal parts may ten be separated," but when the question has been asked and understood we must wait for the child himself to discover that the answer is two 5's and five 2's. And if we present the words *plat* and *plate*, *rob* and *robe*, *fat* and *fate*, that the pupil may by inspection, discover the usual law of the long and short vowel sounds in our language, we must permit it to be an actual discovery by the pupil. He must of himself find out that the final *e* means the long sound of *a* preceding the intervening consonant, and the final consonant the short sound of *a* preceding.

If he does not discover it to-day, we must wait until to-morrow. He must not be deprived of the pleasure of discovering it for himself. No explanation by the teacher will be in place. Nature's method is not only that of self-effort, self-activity, but, as we have said before, it is *slow*.

Finally. The method of nature leads the child slowly, and by his own efforts, from sense-impressions to abstract ideas. Pestalozzi's great merit was his handling of this last mentioned process—the carrying of the child wisely, skilfully, and surely, through sense-impressions to the possession of abstract ideas. Is this passage from self-impression to general ideas an important phase of the child's education? Is it a prolonged process, extending through infancy, childhood, and youth? Is it vital to the mental powers of the man that this phase of development in the child should have skilful superintendence? What are the hints and helps which may be given to practical teachers on this point? Questions like these naturally arise. But the first thing is to clear the air, to illustrate and exemplify the process.

The abstract idea "one-half" is apparently a very definite conception. Yet it is applicable to all kinds of quantity, number, length, surface, cubic space, time, motion, force, etc. The path through which the child must go, to attain this conception "one-half" in its proper generality, is a series of varied sense-impressions and an accompanying process of comparison, abstraction, and generalization, in each stage of which the aid of the teacher is an important factor. Many sense-impressions of the "halving" of lengths, of surfaces, of cubic contents, of lines, of spaces, of forces, etc., must succeed each other. Finally the child, unconsciously comparing, and fusing into one whole the common factor in each of these processes, attains the general notion one-half. So also with any other general idea, such as the "good." Particular examples of obedience, successive illustrations of truthfulness, faithfulness, etc., in the behavior of his fellows, in the conduct of people described in stories told him or related in his own reading—these are necessary, particular, concrete experiences out of which the general idea "the good" is too grow. In what way the teacher is to show his guiding hand—this must be left for another paper.



## The School Room.

FEBRUARY 20.—NUMBER AND PEOPLE.  
FEBRUARY 27.—DOING AND ETHICS.  
MARCH 5.—PRIMARY.  
MARCH 12.—LANGUAGE AND THINGS.

### Occupations of People.

By E. D. K.

#### WORD PICTURING.

I see a large field of thorny, shrub-like vegetation, and the thick flat leaves of this plant are covered by millions of little insects, which have been made very useful by man in the manufacture of beautiful colors. Men and women are in this field gathering these insects and carrying them away in bags. These people are very thinly dressed. There are some trees close by, with only one bunch of leaves and these are spread at the top like a feather duster. What country is this? What are the workers gathering and what is the climate there?

*Ans.* The country is Mexico; the climate is hot; the trees are palms, and the people are gathering cochineal insects from the cactus-plant.

A wild, mountainous region with very high peaks covered with snow. There are valuable mining regions in the valleys which yield silver, copper, and gold. There is a deep, dangerous ravine in these mountains and men are standing on each side of the precipice trying to throw a rope across. There are donkeys and pack mules in sight and there are a few sheep standing about. Overhead is one of the largest birds in the world, which is peculiar to this region. Who can tell me all about this place?

*Ans.* It is a pass in the Andes mountains in South America, and the men are making a rope bridge over the ravine as their only means of transportation. The large bird is the condor.

Another field with colored people at work. The field is covered with rows of small plants, three or four feet high, which have a pale, yellow blossom, and large, white balls bursting from ripe pods. The people who are at work are carrying away baskets piled high with these white balls. What is this occupation and where would such work be likely to be carried on?

*Ans.* It is a cotton field "down South" and the negroes are picking cotton.

On the banks of a large river I see men building a high wooden structure almost the size of a house. It is propped up by long poles. It has no roof nor windows, so it cannot be a house. Timbers are lying all about and men are working on this structure with carpenters' tools. What is this occupation?

*Ans.* It is shipbuilding, and it is carried on close by the river so that the ship may be launched upon the river when it is completed.

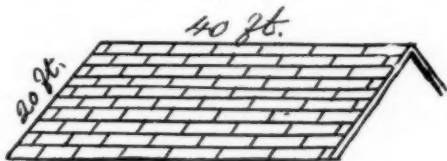
This picture is full of people, dressed in a foreign style. The men wear long, loose robes and turbans wound about their heads. On the ground are boxes and bales scattered about looking as if a journey was being planned. There are two or three camels in the background. Where do you think this is, and what is going on?

*Ans.* A caravan is forming in the Barbary states in North Africa. They are going to cross the desert. It is merchandise that is lying about, and it will soon be put on the camels' backs. A caravan often consists of four or five hundred loaded camels, a crowd of merchants, servants, guides, and horses.

### Illustrated Problems.

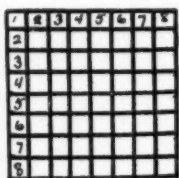
By EMILY M. KEMPF, Newark, N. J.

1. If shingles are 4 in. wide how many would there be in one row of this roof? If 5 in. wide? 6 in.?



If shingles are 12 in. long and laid 9 in. to the weather how many rows of shingles would be required? If 8 in. to the weather? 6 in. to the weather? How many rows are needed for one side of the roof if the first row is double? On both sides? How many shingles are required for the roof? How many hundred shingles? How many thousand shingles? How many bundles of shingles? How much will they cost at \$— per 100? \$— per 1000? \$— per bundle?

#### II.



2. If each square represents 1 sq. in. how long is this surface? How wide? What would be the dimensions of a surface half the size? How many sq. in. would it contain? What would be the dimensions of  $\frac{1}{4}$  of the surface?  $\frac{1}{4}$  of the surface. Draw lines in colors to show any difference between 4 sq. in. and a square of 4 in. Or 3 sq. in. and a 3 inch square. Draw an oblong upon your slates 6 in. long, 4 in. wide, and apply above questions to the ob-

long.

#### III.

- 1, 2, 7, 8, 5, 6, windows. A, hall room.  
3, 4, 9, 10, 11, 12, 13, doors.  
B, C, D, rooms.  
E, bath room. F, hall. G, stairway.

Dimensions of rooms to be left to judgment of pupils.

1. Carpet B with carpet  $\frac{1}{2}$  yd. wide, allowing 6 in. for matching. Find cost at \$1.25 per yd.

2. How much picture molding is needed in C? What is its cost at 5 cents per ft.?

3. How many yds. of carpet will be required to carpet stairs of 15 steps, 9 in. on the rise, 12 in. on the step.

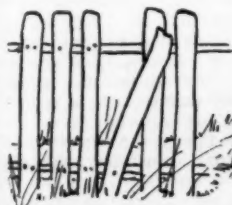
4. How much will it cost to plaster walls and ceiling of D, at 27 cents per yd., deducting doors and windows.

5. How many hard-wood tiles are required for the bath-room, tiles 4 in. square?

6. What is the cost of painting the floor of A at 25 cents per sq. yd.

Any quantity of examples in linear, square, board measure, etc., can be made from this diagram.

#### IV.



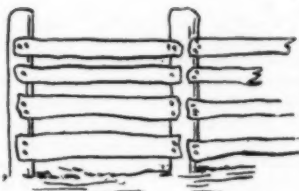
How many square yards in the path around this field if the path is 9 ft. wide?

If the field contains 160 acres, and is 5 rds. wide, how long is it?

How many acres would the field contain if it was 64 rds. square?

If it contained 640 sq. rds? How many sods 2 ft. square could be dug from the field if it is 50 ft. long, 40 ft. wide?

#### V.



1. How many boards 10 ft. long will fence a lot 4 rds. square? How many posts must be set, 9 ft. apart, to make the fence? How many boards would be required if it were 4 boards high? What would be the cost at 15 cents per board?

### Mental Exercises in Percentage.

By C. H. GLEASON, Principal Summer Avenue School, Newark, N. J.

(The following and similar lessons, using other rates, in percentage are given several times a week to our classes for rapid mental work. Nothing is required of the pupil but the answers. At first the examples were given as fast as possible and yet not fast enough to discourage the slow thinkers. Later, ten or twelve a minute are given. Slates are passed, answers noted, and, the standing of the class is taken at the close of each exercise.)

1. What was made and what was received at a gain of 50% on an article that cost \$24? \$36? \$42? \$150? \$75? \$180? \$90? \$200? \$250? \$280, etc.
2. What was made and what was received at a gain of  $\frac{1}{4}$ % on an article that cost \$200? \$400? \$500? \$800? \$6,000? etc.
3. What was made and what received at a gain of 25% on the following transactions: 9 lb. of nails at 8 cts., 100 lbs. of raisins at 5 cts., 200 lbs. sugar at 40 cts., 600 lbs. rice at 6 cts., 150 lbs. at 8 cts.?
4. What was the commission at  $\frac{1}{4}$ % on the following transactions: I sold 44 R. R. shares at \$100? 60 at \$50? 20 at \$40? 16 at \$15? 21 at \$33 $\frac{1}{3}$ ?
5. What was the commission and what was received for a farm sold for \$12,000, commission  $\frac{1}{4}$ %? for \$16,000? for \$2,400? \$3,600? for \$3,200?
6. What is  $14\frac{2}{3}$ % of 840? of 84? of .84% of 560? of 5.60? of .560? of 357? of 3.57? of .357?
7. What is  $\frac{1}{4}$ % of 2,800 acres? of 3,500? of 350? of 4,900? of 490?
8. What must have been my capital, if, after losing 25% of it, I have left \$300? \$900? \$1,500? \$3,600? \$7,500? etc.
9. What was Mr. Wilson's capital, who, after gaining 25%, had 500? 1,500? \$400? 4,000? \$5,000?
10. 36 yards are  $12\frac{1}{2}$ % more than how many yards? 45 yards? 360 yards? 270 yards? 810 yards?
11. 70 feet are  $12\frac{1}{2}$ % less than how many feet? 49 feet? 630 feet? 560 feet? 1,400 feet?
12. What is the difference between 2% and  $\frac{1}{4}$ % of 200 apples? 400? 600? 1,000? 800? 3% and  $\frac{1}{4}$ % of \$600? \$900? \$1,800? \$1,200? \$1,500?
13. 20% of 40 is what per cent. of 4? 6? 8? 12? 16? 75% of 80 is what per cent. of 40? of 60? of 120? of 90? of 300?
14. 25% of 40 is  $16\frac{2}{3}$ % of what number?  $37\frac{1}{2}$ % of 24 is  $33\frac{1}{3}$ % of what number?  $12\frac{1}{2}$ % of 64 is  $14\frac{2}{3}$ % of what number?  $6\frac{1}{4}$ % of 32 is  $11\frac{1}{4}$ % of what number?
15. I sold an article for 40 cts. and gained 25%; what should I have received for it had I lost 25%?

Analysis:

- 5, 25% = \$.40
- 1, 25% = \$.08
- 4, 25% = \$.32, cost
- 3, 25% = \$.24 at 25% loss.

Permit a subscriber to THE JOURNAL for ten years to thank you for the very valuable aid derived therefrom. Not only has it been of great help to me in formulating plans for better work in the school-room with my class, but I have found much of interest to the pupils in its columns. To illustrate, a short time ago you published an historic drama adapted to the ability of the average grammar school pupil. This was rendered at an entertainment given by the pupils last week, and, though the weather was quite inclement, the proceeds of the entertainment amounted to more than thirty dollars, which will be invested in books for our school library. Wishing you abundant success for the present year, I am, very truly,

Ark.

J. J. DOYNE.

THE SCHOOL JOURNAL has returned \$5.00 to me for every \$1.00 I have spent on it. I have never taken it a year without finding a single article well worth a year's subscription; the inspiration that has come from contact with persons of caliber on the questions it discusses has been of incalculable value.

Ala.

C. R. McR.



## To 10,000 in a Year.

By SUPT. J. M. GREENWOOD, Kansas City, Mo.

Editor SCHOOL JOURNAL:—

Manitoba has declared (JOURNAL of Jan. 16) that I said thus-and-so about *five-year-old children*; when I said very plainly what "an average child from six to eight years of age" will do in numbers the first year he attends school. Furthermore, I stated that "in general a child should not be started to school before the sixth year; that at that age the brain has attained about 85 per cent. of its adult size, and that the child is as able to use it with as much precision as he controls his hands and feet." Please note the difference. Were it necessary, I could tell what the average child from five to six years old can do easily in number work, and I may do so at some future time.

For the information of those who are unacquainted with my methods of investigating school questions, I will say that when I write I express deep settled convictions, the result of mature deliberation. I never advocate a thing that I cannot do, or that I have not seen successfully done by others. I must do my own thinking. It is the truth I want. Without assuming to be egotistic, I will say that I have given more thought to "how to teach mathematics," beginning with the lowest form of number to the most abstruse branch of this great department of exact knowledge, than to any other class, or classes, of learning. I do not feel called upon now to present anything more than a very simple phase of number work. Yet, I will venture the opinion that the so-called "Grube method" and the parasitic offshoots from it, have done more to vitiate true arithmetical teaching the first two or three years of school life in our schools than all other hurtful or ignorant influences combined. Out of it, Medusa like, has sprung all the little nonsensical stuff that is as stupefying to the intellects of children as the opium habit is to the nerve centers of grown people. I can find no milder language to express my opinion of it than to call it the "Slaughter of Intellects Recklessly Continued."

But to Manitoba's argument:

I submit a very few facts, fresh from the school-room, picked up here and there. Literally, however, I am loaded down with them.

The other day I visited a primary room. The children were between 6 and 7 years of age. The class numbered 30, not a pupil had attended school a day before last September, when the schools opened. Not one of these children had been in school to exceed 4 1-2 months, or 90 days. Here are a few of the problems these little fellows answered promptly, quickly, accurately, and orally:

"If one marble cost 1-2 a cent, what will five marbles cost? 7 marbles? 9 marbles? 15 marbles?"

"If a man walks 1-2 mile in one hour, how many miles will he walk in 15 hours? In 12 hours? In 17 hours? In 1-4 of an hour?"

"How many fourths make 1-2? How many fourths make 3-2? If 1-2 of a pound of butter cost \$3-4, what will one pound cost? If one pint of milk is worth 4 cents, what is the price of 1 1-2 quarts? 3-2 quarts make how many pints? How much more is 3-4 than 1-2? 1-2 + 1-2 + 3-4 = how many fourths?"

These exercises were all answered as rapidly as they were asked, and hardly a child failed to give the correct answer. The teacher now wrote on the blackboard "3)3694, 4)4889, 2)24,889,

2)4,468, 3)63,375," and the pupils wrote the correct results, and

then read them. Next this problem was dictated to the class:  $988 + 132 + 101$ . The pupils wrote the numbers, and gave the correct result. No pupil failed to add correctly. The teacher conducted the exercises thus far. I now gave this on the board and called for the answer:  $9 + 4 + 3 + 7 + 4 + 1$ . In less than 30 seconds, 27 had solved it correctly. Next, I gave this as a mental test: "10 boys, 5 girls, 10 boys, and 10 girls, are how many boys and girls?" All hands up, and when a little 6 year old girl said: "35 boys and girls," every hand went down. It was this little girl, who, the day before, had answered this question: "If a bushel of potatoes cost one dollar and twenty-five cents, what will a half bushel cost?"

These children read and spell intelligently for little folks, and they can write well enough with pen and ink so that any one not blind can read it. They write numbers and read them up to 9,999. For any one to say that they do not know what they are doing, is about as sensible as to say that these little children do not know the sun from the moon. None of their regular work has been neglected. The little woman who does this, teaches 60 children on stormy days, and about 70 on other days, and she is one among several others who can convince all who will be convinced what little children can do under wise, energetic, and well directed teaching.

In another room where the children had attended school 120 days, to one class containing 20 members, the following problem was solved by 16 pupils in one minute:  $365 + 486 + 975 + 634 + 481$ . This problem, "From 9641 take 1226," was written and solved in 90 seconds. Orally they would take the 1-2, 1-3, 1-4,

or 1-5 of any small number almost instantly. Outside of their first reader, they read and spelled readily from other corresponding supplementary books. The only problem I gave the class was this one, "To add  $9 + 8 + 7 + 6 + 6 + 9 + 8 + 7 + 5 + 4 + 3 + 2 + 1$ ." Fifteen had the correct answer in 45 seconds.

In another room, the higher class consisting of 34 members, now doing the last 12 weeks' work of the first year in school, solved the following: "Add  $9,368 + 4,725 + 6,937 + 5,846 + 8,795$ ." 28 pupils had solved it in 90 seconds. This problem, "From 9,127 take 5,989," was solved correctly by all but 3 in one minute. "Add  $9 + 8 + 7 + 6 + 7 + 8 + 6 + 9 + 8 + 9 + 6 + 7 + 3$ ." 29 had the correct result in one minute.

In another room, a class of 23, having been in school 20 months, lacking a few days, solved the following: (1)  $727,539 + 992,893 + 765,497 + 839,257 + 643,975 + 737,587$ . (2)  $923,748 + 389,724 + 759,396 + 482,735 + 938,927$ . The numbers were dictated to the class, and then at a given signal, added. No numbers were erased, and the first results were as follows: 16 had the correct answer to the first, and 14 to the second. Three pupils solved the first in 45 seconds, and the last one to finish, required 2 1-2 minutes. The second in point of time varied but slightly from the first.

To show how firmly I believe in the arithmetical work we are doing in our schools, I will say that I have submitted the West Point examination questions, the New York Regents' examinations, the Civil Service examinations, etc., to our pupils and they have always passed creditably. The classes taking these were seventh grade.

Only last month, "Questions" that Mr. Thornton submitted to the model department of the Cook county-normal school, were given to many classes here, and all our classes made an average of from 175% to 500% above the averages reported by Mr. Thornton in his pamphlet. In a short time, Mr. Bright's questions, although they are much less difficult than Mr. Thornton's, will be given to classes here by my assistant and myself.

Again, if there is any one in this country, or any other country as to that matter, who will send a set, or sets, of examination questions, adapted to any grade of pupils in our schools, I will take great pleasure in submitting them and reporting the results through any channel of communication that may be chosen.

I am fully aware of the fact that thousands of innocent, ignorant, good-intentioned teachers say that samples of such actual work as I have submitted, cannot be done by average children. But it is done; an accomplished fact which puts all speculation to route; but with laziness and ignorance I have no argument. To people willing to work, nothing is impossible which lies within the range of human achievements.

I will close by saying that the insane idea that a child must learn and exhaust all the possibilities of numbers up to 10, or 100, or 1,000, or to 10,000 in order to know numbers, is one of the vagaries of a misdirected, but overwrought, imagination. I could not swear that I have ever written all the numbers from 1 to 1,000, much less to 10,000; yet I know the numbers. Must a child learn all the words composed of three letters before he ever learns a word of four letters? *Who says so?* The reason the lower grade pupils in the Toronto public schools read better than any other children of corresponding grades on this continent, is that they learn to spell and pronounce a much larger list of words than other children. They learn to know words and to speak them. The teachers are not afraid to let the children do something.

Now, if "Manitoba," for whom I have the highest respect, will only take a few more well directed steps forward into the clear sunlight of reason, common-sense, and child-life activity and working capacity, another soul will be made happy and filled with enthusiasm in the belief of the future progress of the race. May he step, is the sincere wish of his friend.

In the last ten years the school attendance of Indian pupils has much more than trebled, and the number of schools has more than doubled. The government appropriation for Indian schools was \$20,000 fifteen years ago; \$135,000 ten years ago; had reached \$1,179,916 in 1888; had become last year \$1,842,770; for the current fiscal year is \$2,291,650; finally, the sum asked for the year to come is \$2,917,060. The religious bodies have also been increasing their work, having appropriated for 1891 the sum of \$554,558, against \$228,259 five years before. The churches establish mission schools for religious and educational purposes, and Congress appropriates sums for the maintenance of pupils in these schools. It is a mutual benefit, the government naturally getting its work done cheaper in them than in the schools established under its own bureau, since the former have also their church funds to rely on; while the government subsidy is a welcome help to the mission work. The Roman Catholics take the lead, giving more than all the other churches combined.

An interesting recent experiment is that of putting Indian pupils into ordinary public schools attended by white children. In 1890 a contract was made for thirty-nine such pupils in a district school of Utah, and during the past year sixty-one others were so placed in various states and territories.

## Effects of Education.

CHIRICAHUA APACHES AS THEY ARRIVED AT CARLISLE FROM FORT MARION, FLORIDA, NOVEMBER 4th, 1886.

## A TALK TO PUPILS.

We are none of us aware what a powerful machine the school is; we look at a steam engine and we think that it is powerful, but the school is more powerful than the steam engine. The school is the creator of steam engines, and of all kinds of valuable things.

You must bear in mind that our ancestors were once roaming in the woods of Germany, not so much unlike the Indians that roamed in the woods of America, when it was discovered by the white men.

Now, I ask you what has changed the Germany of the times of the Romans to the Germany of to-day, and you will say it is education. The Germans learned from the Romans who were at that time the greatest and strongest nation in the world; they had schools and books and teachers; in the course of time the Germans obtained all these.

It is education then that changes a nation of savages to a nation of peaceful industries, well-clad, comfort-having, knowledge-engaging, and religious people; remember, nothing else could do this but education. A few years ago there was a tribe of Apache (Ah-pah'-sha) Indians in our western country that made considerable trouble; they had been brought up to consider murder as the best thing they could do. I have seen a picture of eleven of these that were taken prisoners and kept in Fort Marion, Florida—it was a picture of degradation; I saw another picture of the same group taken after they had been at school at Carlisle, Pa., for four months. What a change had taken place! The picture tells the story of education. Education means hope and joy and advancement.

D.



1. Clement Seanilzay. 2. Humphrey Escharzay. 3. Beatrice Kiahtel. 4. Samson Noran. 5. Janette Pahgostatun. 6. Hugh Chee. 7. Basil Ekarden. 8. Bishop Eatannah. 9. Margaret Y. Nadasthilah. 10. Ernest Hogee. 11. Fred'k Eskelsejah.

direction. Immediately about the long, low warehouse, in and out of its wide doors, surges a great crowd of Indian women. Many are ill-clad and bent with age. They carry large dirty cloths, pieces of gunny sack, or greasy bags, in which they will soon be seen bearing away beef and flour. This is ration day; "issue day," as it is called. The Indians are receiving "Uncle Sam's" supplies. The younger women are on hand with small bags to carry the family's allowance of coffee, beans, hominy, rice, soap, and other such light or small portions of the weekly "ration." The very youngest women, those just emerging from girlhood, have their faces gaily painted and stand in groups about the corners, near the doors. They chatter and giggle, and partly cover their faces with their bright-colored shawls or blankets, while stealing sly glances at some Indian dude who is strutting near, or lashing his pony into foam to make it dance and plunge. The middle-aged women gossip; but the old women carry out huge burdens of beef and flour. They sputter some, but no one seems to listen. Here then are the three ages of Indian women: giggle, gossip, sputter; flirt, leisure, drudge.

## Indian Reservation Life.

By F. B. R., New York City.

There is much erroneous sentiment concerning the Indians as they exist to-day in their reservations. Let us step inside an Indian agency and see how we find things. There is a large stone warehouse. Indians are camped on all sides, and for a mile in each

CHIRICAHUA APACHES, FOUR MONTHS AFTER ARRIVING AT CARLISLE.



Where are the men? They line the outside of the warehouse; sit in and under wagons; hang on fences; and throng the Indian trader's establishment, near by. Then they lie about, passing the pipe round and round (one pipe to a group), smoking and telling stories all day long. But a few men are at the warehouse attending to family affairs. Every year more men are seen doing the heavy work.

All about the camp Indian children are playing, dogs fighting, and Indian young men racing their ponies.

Let us step inside the warehouses. The Indian women, as representatives of their families, go forward in order and present their ration tickets at an officer's window. Then the amount of coffee, tea, sugar, hominy, beans, soap, flour, bacon, etc., is called out, weighed or measured, and poured into little troughs or chutes whose mouths empty in front of the high-fenced counter. The Indian woman holds a long cloth bag under the chute and receives the coffee. Then she ties a string about the bag just above the coffee and hastens to another trough for sugar. A string is tied above the sugar; and so on till the long bag is filled and tied into a series of huge knots. At the further end of the long, low

1. Ernest Hogee. 2. Humphrey Escharzay. 3. Beatrice Kiahtel. 4. Samson Noran. 5. Janette Pahgostatun. 6. Hugh Chee. 7. Basil Ekarden. 8. Bishop Eatannah. 9. Margaret Y. Nadasthilah. 10. Ernest Hogee. 11. Fred'k Eskelsejah.



warehouse, fresh beef is being issued. It is stacked on the floor tons high, covered with flies and dripping with gore. Indian men are slashing it with long knives and cutting the bones with axes.

All this food free? Not at all! The Indians have paid for it. They have relinquished hundreds of millions of acres of land to the United States government, for which, according to treaty stipulations, the government owes them many millions of dollars. This is being paid, not in cash, but in food, clothing, and schooling. Over yonder is a large government boarding-school the Indian agent's office and residence, government shops, a shoe shop, tin shop, carpenter shop, blacksmith shop, all for the use of the Indians, and mostly manned by Indian mechanics, and a saw mill and grist mill. Besides these there are the dwelling houses of numerous employees and hangers on; also the several buildings of a licensed Indian trader's establishment. Such a village is what is commonly known as an "Indian Agency."

But what is an "Indian Reservation"?

Let us suppose issue day is over. The Indians are scattering in all directions. Many move along the Missouri river valley. Others climb the series of bluffs, that rise one after another from the river to the high prairie beyond. Scores of wagons are rattling along these roads. The women, children, and "issue goods," are all in the bottom of the wagon box, while the men enjoy the spring seat in front. Two little ponies and a big whip constitute the team. Several colts and dogs follow each wagon.

Some of the Indian reservations are very large tracts of land; for instance, four times as large the state of Rhode Island. It takes many of the Indians two or three days to travel from the agency to their homes. On these large reservations the issue days come about twice a month; but the greater part of the time is spent in traveling back and forth. Farming is neglected, and civilization progresses slowly. But there *is* progress. Indeed within the last fifty years the Indians have advanced further toward civilization than our European forefathers did in hundreds of years.

On one particular reservation the Indians are divided into what may be called conservative and progressive parties. The conservatives cling to their barbarous forms of living, their heathen ceremonies and dances. They are lazy; do not care to learn our ways; paint their faces; wear blankets and long hair, and would rather beg than plow. But the progressives wear citizens' clothes, and have short hair and clean faces. They cook and eat according to civilized methods. Most of them are conscientious Christians. They are industrious, but do not accumulate much property because constantly impoverished by their visiting relatives of the conservative party. Nevertheless the progressives are persevering and increasing. They are ready to learn new ways, and anxious to have their children educated.



## Supplementary.

Richard Anthony Proctor.

March 23, 1837.

September 12, 1888.

Saturn and its System,  
Half-hours with the Telescope,  
Light Science for Leisure Hours,  
Half-hours with the Stars,  
Borderland of Science,  
The Old and New Astronomy,  
Sun Views of the Earth,  
Orbs around Us.

Handbook of Stars,  
Gnomonic Star Atlas,  
Elementary Astronomy,  
Double Stars,  
Transits of Venus,  
Constellation Seasons,  
Other Worlds than Ours,  
Elementary Physical Geography.

**His Boyhood.**—He was educated chiefly at home, being in delicate health for several years. He was a diligent reader, his tastes inclining to history, literature, and theology more than to mathematics or the sciences. He showed a great liking for the construction of maps, and in his later life regarded charting not only as an important aid in scientific investigation, but as a very instructive mental exercise.

**As a Student.**—At the age of twelve, he began to read Euclid, and at once evinced a liking for geometrical study. Subsequently he pursued his studies at King's college, London, and at St. John's college, where he took his degree of B. A., in 1860. He was appointed Fellow of the Royal Astronomical Society in 1866, and afterward honorary secretary and editor of its "proceedings."

**His Life-work.**—Mr. Proctor was singularly fortunate in formulating theories which were subsequently confirmed and in some cases demonstrated by new observations. Having analyzed the results collected by the Herschels and others, and carried out a series of original researches, he was led to a new theory of the structure of the stellar universe. He maintained, on theoret-

ical grounds, the fact since established, of the solar corona, and also that of the inner complex solar atmosphere, afterwards discovered by Young. Although the promulgation of these theories drew him into frequent controversies, in his main subject of original investigation, the constitution of the heavens, he contented himself with collecting evidence, weighing objections, and endeavoring to progress toward the solution of the difficult but interesting problems associated with the subject.



**As a Writer.**—He wrote incessantly, contributing to journals of every kind, on a great variety of subjects, but always with the most interest on those relating to astronomy. From 1866 to 1873, he published no less than twenty-one books and essays. This rapid multiplication of books, was unfavorable to the promotion of science by original research. Although driven to write about science for a livelihood, or forsake it for a more remunerative employment, he never neglected the more serious work of investigation. During the same period, from 1866 to 1873, Proctor contributed more freely than any other Fellow of the Astronomical Society to its "Proceedings," the pages of which are devoted exclusively to accounts of original search. He started a periodical, first weekly, afterward monthly, called *Knowledge* which was devoted principally to making science popular, and to which he was himself a voluminous contributor, writing on everything from "Americanisms" and "Whist" to the reasons for the building of the Pyramids.

**As a Lecturer.**—Prof. Proctor was somewhat under the medium height, and had a strong, well-built frame. His complexion was ruddy, indicating an active, cheerful temperament. As a lecturer he was noted for the extreme simplicity and clearness with which he could present a difficult subject. His illustrations in his lectures on astronomy, a science he did so much to popularize, were of such a character, that a child could understand them, and yet they answered their purpose in every way. Prof. Proctor communicated his enthusiasm to his audiences, and there are thousands who date their love for the science from the time when they first saw him on the rostrum.

## Historical Days of March.

By LIZZIE M. HADLEY.

(The children representing different days should carry cards with the day of the month and year upon them.)

**School.**—Freezing, thawing, rough winds blowing,  
Pray what have we here?

**March.**—I'm a tiny arc from Time's circle,  
A bit of the bonny year.

When Rome in her might and power  
Stood ever the first in wars,  
She gave me the name of Martius  
To honor her great god, Mars.

The Saxons called me the "month of storms,  
Or the rugged "month of strength;"  
Old Scotch and English legends  
Add three good days to my length.

If you look far down the vista  
Where all the old years shine,  
You will see that there I am first of all,  
The head of the honored line.



But as years went hurrying onward,  
Swift as a flying bird,  
And change was written on everything,  
The *first* month became the *third*.

*School*.—March was considered the first month in the year, until the change in style in 1752.

*March*.—Do you think I care for these changes?  
That I mourn for honors lost?  
That for this against a stormy sky  
My wind-blown branches are tossed?

Nay, for the world grows better;  
These changes I'm sure are well,  
And now will you welcome my children  
Who have come with a story to tell?

*School*.—Yes, we'll welcome every one,  
Breezy daughter, blustering son.  
Let us hear the tales they tell.  
Of what hath your month befell?

*March 27*.—Centuries on centuries stand,  
Since our own fair western land  
Lay across an unknown sea,  
Waiting for discovery.

Then the brave men of that day,  
In their good ships sailed away,  
Took their lives within their hands,  
Seeking gold and unknown lands.

One went searching in good sooth,  
For the fabled "Fount of Youth,"  
And while I told off the hours,  
Lo! He found the "Land of Flowers."

*School*.—Florida was discovered by Ponce de Leon March 27, according to some authorities, 1511; others place the date at 1513.

*March 8*.—This day, across the stormy sea,  
We felt the lion's paw,  
England believed that might made right,  
And passed the "Stamp-Act law."

*School*.—The Stamp Act was passed March 8, 1765.

*March 18*.—As east and west the tidings flew  
To hamlets, towns, and farms,  
It seemed the awful tocsin, sent  
To call the land to arms.

Then came an angry murmur  
Repeated o'er and o'er,  
Growing louder and still louder,  
Till it reached old England's shore.

And that sound of righteous anger  
The people's strength revealed.  
So England changed her course,  
And the Stamp Act was repealed.

*School*.—The Stamp Act was repealed March 18, 1766.

*March 5*.—The tale I tell is one of blood,  
But yet so far away;  
The Boston massacre to us  
Seems but a dream to-day.

*School*.—The Boston Massacre occurred March 5, 1770.

*March 31*.—Our troubles were not ended,  
We had vowed we would be free,  
And so, the British passed a law  
To shut from us the sea.

*School*.—The Boston Port Bill was passed March 31, 1774.

*March 17*.—Oh, was there e'er a happier sight  
In dear old Boston town,  
Than that on which the morning sun  
Upon my day looked down!

A murmur, as from myriad throats,  
A sound of hurrying feet;  
Then we saw the British army  
Go marching down the street

To where their ships were waiting  
Upon the sparkling bay,  
And ere the day was ended  
We saw them sail away.

*School*.—Boston was evacuated by the British, March 17, 1776.

*March 15*.—At Guilford Court House, under Greene,

Our army bravely fought,  
And though the British victory gained,  
'Twas a victory dearly bought.

*School*.—The Americans were defeated at Guilford Court House, March 15, 1781.

*March 4, 1791*.—With just a band of thirteen states  
The Union was begun.  
And Vermont was first to join them,  
In seventeen-ninety-one.

*School*.—Vermont was admitted in to the Union, March 4, 1791.

*March 4*.—Count the days March brings, you'll see  
None more famed in history  
Than the one each fourth year sent,  
When we make our *President*.

*School*.—"Inauguration Day" has been every fourth year since March 4, 1797.

*March 1*.—There was war 'twixt France and England,  
For each the *world* would own,  
And Congress, on my day, decreed  
To let them both alone.

*School*.—Congress interdicted commerce with France and England, March 1, 1809.

*March 2, 1815*.—And now straight o'er the fair blue sea,  
From the far-off Afric coast,  
The pirate ships came sailing  
With their fierce and warlike host.

To give these men their just deserts,  
To calm our seamen's fears,  
War was declared upon my day  
By Congress, 'gainst Algiers.

*School*.—Congress declared war against Algiers, March 2, 1815.

*March 3, 1820*.—There was trouble when Missouri  
Knocked at the Union door,  
There are slaves enough, the people said  
And we will have no more.

Then Congress tried to help her,  
And yet do the people's will;  
And so my day was made a law,  
The "Missouri Compromise Bill."

*School*.—The Missouri Compromise Bill was passed March 3, 1820.

*March 15*.—And now to join the list of states,  
We saw young Maine appear,  
And when next the Union roll was called,  
We heard her answer—"Here."

*School*.—Maine was admitted to the Union, March 15, 1820.

*March 1, 1842*.—Next, Texas tired of marching  
So near us, yet alone,  
Now joined the grand procession,  
And made our cause her own.

*School*.—Texas was annexed to the United States, March 1, 1842.

*March 27, 1847*.—"Twas on my day, in Mexico,  
That our army under Scott,  
With the Mexicans at Vera Cruz  
A bloody battle fought.

*School*.—The battle of Vera Cruz was fought March 27, 1847.

*March 1, 1867*.—Now while we all were trying  
To forget old wrongs and hate,  
To our ever widening circle  
Nebraska came,—a state.

*School*.—Nebraska was admitted to the Union, March 1, 1867.

*All the days*.—Our tale is told, O March!  
O'er all we drop the veil of time,  
And listen while the bells of peace  
From the nation's belfry chime.

Galloping, galloping, galloping in,  
Into the world with a stir and din,  
The north wind, the east wind, and west wind together,  
Inbringing, inbringing the March's wild weather.

—C. F. Woolson.

## The Educational Field.



Robert Hebert Quick.

The name of Mr. Quick is so familiar to American teachers that some account of him will be interesting to those who have read his "Educational Reformers." In early childhood his health was very delicate, and so he was prepared for college in private schools, from which he went to Harrow, and afterwards to Trinity college, Cambridge. He then was admitted a clergyman of the church of England. His life work was that of a parish priest, an assistant master at Cranleigh, a master at Harrow, and the head of preparatory schools at Orme Square and Guildford. As a clergyman his sermons were always fresh and interesting and usually preached extempore. One, who knew him best as a minister, says, that "his sympathies were always with the poor, and his spiritual work pure, loving, and deeply reverent." As a teacher, the head-master of Harrow says, "His affectionate, brotherly ways, his instinctive sympathy, his readiness to receive as well as to give help, his sturdy, common sense, his merry twinkling smile of humor, his quiet enjoyment of being quizzed by friends, who loved and respected him, his knowledge of the scientific study of the history of education, at home and abroad, made his companionship of great worth." Although he was not made to be a great teacher in a large school, he was beyond doubt, an invaluable addition to the schools with which he was connected.

Many of his pupils remember with delight his kindly hand and his more kindly voice. It was no unusual thing to see him on the nursery floor, or the drawing room rug, rolling about, with a swarm of happy children taking the most unpedantic liberties with his long and long suffering beard, the very genius of good nature. He dearly loved young children. He believed in their intuitions and the value of their fresh immaturity.

It was a great offence to him to force and cramp them by rigid systems of training under the guise and in the name of discipline, or uniformity, or competition. On one occasion two young children at Harrow had caught a live mouse in a trap. What should they do with it? Some servants wished to drown it. "Not to be thought of," said the children. Might they turn him loose in the garden? "Not to be thought of," said the gardener. Thus baffled, the young philosophers fell back on first principles. "Who was the kindest man in Harrow?" The answer was not long in coming. They ran for Mr. Quick and went straight for his house, intending to leave the poor, trembling mouse in his care, but finding this kindest of men out, they let the little prisoner in his drawing room, and ran joyfully back to their play, fully satisfied that the future career of the little animal was perfectly safe. This intense love for children was a marked characteristic of his mother who kept a school for little children of such a nature as to be Froebelian before Froebel had done his work. Yet with all this childishness he possessed the highest type of intellectual vigor. His conversational powers were of the highest order; poets, novelists, historians, and great authors of all sorts—he knew them all. His very nature scorned the mean, the false, and the unjust, and loved whatever was noble and praiseworthy. It has been said of him that "he might doubtless have been a greater man had he been less good." At the age of sixty he died. His chief title to the regard of the world who did not personally know him rests upon his "Edu-

cational Reformers." Soon after he had revised this book of his younger days he was taken away. But although his life was shortened it was not incomplete. No teacher of late years is so worthy of being held in affectionate remembrance as Mr. Quick.

An education bill, now pending in the Prussian landtag, has already caused the resignation of three important members of the Prussian cabinet. This bill threatens to revolutionize the methods of instruction in that country and is believed to be framed according to the wishes of the young kaiser.

One object of the bill is to stamp out skepticism and enforce Christianity by act of parliament, with the evident belief that the cause of monarchy and the cause of religion are inseparable. It is said that at least a third of the adult male population of Germany never enter a church. These agnostic non-churchgoers, as a class, have formerly given their influence in favor of a representative government. To convert this class into Christians, and thus make firmer the present form of government, is supposed to be the object of William II. in the present measure. This provides that the parents of any child, if they hold one of certain specified religious beliefs, may insist that the child shall be taught their belief at school by a specially qualified instructor. If thirty parents belonging to one of the designated religious bodies demand a separate school, it may be built for them at the discretion of the authorities; and if the demand come from sixty parents, compliance with it is obligatory. In schools belonging to a religious confession the teachers must all belong to that confession, and the clergy are to have the right not only to be present, but to examine the children and admonish the teachers if they find the religious instruction unsatisfactory. Children not belonging to any of the designated religious bodies may be forced to attend religious instruction if not exempted by the president of the province; and if they are so exempted, they must be privately educated in the parents' peculiar tenets.

The city of Buffalo has organized an educational association and has had lectures by Mr. and Mrs. Hailmann, of La Porte, Indiana. Much interest was manifested. It is worthy of remark that when there is an educational revival or educational interest in a town a study of the kindergarten is made. And we will venture the statement that any man who ranks at all high as an educator in this country, or any other, has been and is a close student of the kindergarten. This is a point worthy of thought.

The *Morning Star* of Glens Falls contains an account of a meeting of citizens respecting a public library: "Supt. Williams whose fame is extensive as the founder of the great summer school in this beautiful town, read a valuable paper and announced that a citizen was ready to found a library. No thoughtful teacher but sees that *his work must be supplemented by reading*. But what is he doing about it? Who of all the teachers has cried aloud: 'You must provide books for the children to read; I sharpen up their wits, I train their faculties, I create new thoughts and desires, but alas! they must return to their homes unable to expend these new energies?' Teachers, you leave a part of your duty undone if you don't arouse the people to have libraries."

The report of the school committee of Florence, Mass., gives an interesting account of their experiment in manual training about a year ago. Rev. F. A. Hinckley witnessed the presentation of the knife-cutting course by Mr. Geo. B. Kilbon, of Springfield, Mass., and received the inspiration to attempt the work in Florence. The result has been successful. Not only the pupils, but the teachers also have taken instruction from Mr. Hinckley. The verdict of the teachers is, "It leads the children to close observation and accurate work, calls forth their mental and physical powers, trains the judgment, and gives self-reliance. It also keeps the children happy, good natured, and patient."

The prize of two hundred and fifty dollars, offered by Mr. Thomas G. Shearman, of Brooklyn, New York, for the best essay on the subject of "State and Local Taxation of Personal Property in the United States," has been awarded to Mr. S. M. Dick, of Ann Arbor, Michigan.

The committee of award consisted of Professor Dewey, of the Massachusetts Institute of Technology, Professor Seligman, of Columbia college, New York, and Professor Folwell, of the University of Minnesota.

Superintendent Day, of Cleveland, says, "If we are to maintain our schools at the highest standard we must occasionally bring in some outside talent. I would prefer teachers who are not all over town trying to get people's influence to assist them. I think that sort of conduct ought to debar an applicant from appointment."

The next Primary number of THE JOURNAL will not be issued till March 5. (See first page.) After this the Primary number will be issued on the first instead of the last week in each month.

Cornell university receives annually a sum of about \$57,000, which is expended in giving free tuition to five hundred and twelve under-graduates. The university also gives free tuition to quite a number of post-graduates, in addition to the amount which is expended annually for the maintenance of fellowships and scholarships.

Learning to sew is compulsory in the Washington schools for girls in the third, fourth, fifth, and sixth grades. The schools furnish all the material except the thimbles. The system of sewing was introduced into the city about five years ago and 6,000 girls between the ages of eight and fourteen years now give one hour each week to learning to sew.

It has been discovered that Mrs. Christopher Columbus was a Miss Palestrello; that she was the daughter of a navigator, and that she made many hazardous voyages with him. Why didn't she come to America?

The *Chicago Herald* makes a vigorous protest against the allotment of \$40,000 by the board of education for the study of German in that city:

"The addition of \$40,000 to the cost of German is simply an outrage. What proportion of the additional 3,000 children in the schools will derive one cent's worth of benefit from this added \$40,000? Was ever demagoguery more profligate or more reckless of the labor that earns money taken up in taxes? Let us see what this \$40,000 is to seem to go for. In fact, it will not go practically for good anywhere. But where is it to be ostensibly applied? One year ago the high school membership was 4,375; this month it is 4,864, a round increase of 500 in twelve months. The primary grade membership a year ago was 84,376; this month it is 86,012, an increase of 5,000, or ten times that in the high schools. Every hour of those 5,000 children should be spent on simple English studies; nine tenths of them will never enter a high school and only a portion a grammar school. The \$40,000 will be worse than wasted; in fact, it will scarcely touch the children, for the study of German is optional and parents of primary grade pupils have too much sense to impose it on them in the earlier years. Will it go, then, to the extra 500 pupils in the high schools and the added 3,000 in the grammar grades? Where will it go? To whom is it to go? For what is it to go? How can an additional \$40,000 be spent in the schools of Chicago in one year on an optional foreign language pursued only by a small number of students when the total increase in membership is only 8,000? Explanation is certainly demanded."

At a meeting for hygiene held in London, England, Dr. Leo Burgenstein, of Vienna, Austria, lectured on "The Working Curve of a School Hour." Basing his assertions on close practical observations, he explained in what time and in what manner the receptive faculty of a child's brain is changed. From the working curves made after minute practical experiments he deduced the conclusion that not even the simpler studies should occupy the child longer than  $\frac{1}{2}$  of an hour at a time. On motion of Dr. Burgenstein, the following resolutions were adopted:

1. The question of mental overwork is to be decided after exact studies and experiments; school boards are to be urged to make such experiments.
2. As long as the question of overwork has not found an answer based on scientific observations, the time of school sessions should not exceed 45 minutes, and each session should be followed by a 15 minutes' recess. —*Pädagogische Warte.*

A new preparatory school for Yale college is soon to be erected in the northwest corner of Connecticut, through the generous donation of Mrs. Hotchkiss, widow of the manufacturer of the Hotchkiss gun. It is to be called the Hotchkiss preparatory school. This lady has given the land and \$150,000 for the completion of the school buildings, and has contributed \$500,000 for the endowment of the school. It will accommodate 100 students.

The attention of subscribers is called to the following notifications:

When changing the address, it is not sufficient that instructions be sent to the post-master to forward mail. It is contrary to the postal law of the United States to forward newspapers, and they are thrown in the waste-basket, if not delivered to some of your friends.

When a subscriber changes his address, the publisher of the paper should be notified of the fact. It will save much annoyance and loss, as the law holds subscribers responsible for lost newspapers, unless notification to the publisher has been made that the address has been changed.

Last year the university of Michigan had 168 more students than Harvard university, which had 2,252; but this year Harvard has 418 more than Michigan, which has 2,495. While Harvard has gained 361, Michigan has gained only 75. These two institutions of learning are the foremost in the country, so far as their enrollment books are concerned.

At the State Association recently held at Fairhaven, Wash., the synthetic system of teaching reading was discussed and great interest manifested to learn its distinctive features. The local press (Fairhaven) has the following:

"An instructive discussion of the method was had before the association and many prejudices to it dispelled by the practical presentation of the method and its results.

The publishers of the text-books upon the synthetic system have purchased

from Superintendent Gault the right to publish and circulate his thesis upon the system which was recently delivered before the Academy of Science, and it will shortly be issued in pamphlet form and distributed among inquirers.

Superintendent Gault says that several families in this city have purchased the manuals and text-books, thus acquainting themselves with the method and are using them in home instruction."

Prof. H. E. Holt, of Boston, has just made happy his many pupils and friends in New York city by a short visit.

At the rooms of the Lexington Musical Union formed this season he was warmly welcomed by his loyal pupils, who in turn received from him a most interesting and inspiring talk. His new vocal harmony drill charts and modulators, that he introduced to the class, are far in advance of anything yet offered to the public as aids in the study of music. Prof. Holt also spoke by invitation at the new Carnegie Music Hall to the Teachers' Music Association, and at the College of the City of New York to the Primary Principals' Association. These lectures were regarded as valuable as they were interesting.

Superintendent Swett has been making systematic inquiries among parents as to the amount of home study by the pupils and the results as to health. Responses have almost unanimously condemned the practice of home study, and many instances of resulting ill health have been cited. Supt. Swett says:

"The present course in the high schools includes more than is required for admission to the university, and here is the chief cause of trouble. For instance, solid geometry is not required for admission to the State University, as it is taken up from the beginning in the Freshman year. If that part of geometry were cut off it would relieve the high school pupils of from one to two hours' study a day for five months. If there is need of any further reduction of work, astronomy—not required by the university—can be lopped off. The smattering of that study which is acquired in a few weeks' cramming is worth so little that it would hardly be missed. If any further reduction be needed, the work in chemistry can be curtailed to just what is needed by the university, and no more. To reduce the hours of home work many parents have suggested that the school session should be extended to 320, and an additional half hour be allowed for study at school. The recommendation is a good one.

"We have three high schools. There seems to be no good reason why they should all be reduced to a Chinese uniformity in courses of study. In the Boys' high school a considerable number of students, ninety-seven, are looking forward to the university. In the Girls' high school a large number, 137, intend to enter the normal class. In the Cogswell school technical training is an important element in the course. Is it not in the line of modern educational progress and in accordance with common sense to allow some differentiation of studies to meet the different needs of students?"

The resignation of William Jones, as an assistant superintendent of schools in this city, deserves a special notice from the fact of his long connection with public education. He successively occupied the position of trustee of public schools in his native ward, and as a member of the board of education from 1849 through 1856. He was first elected an assistant superintendent while a member of the board of education. Mr. Samuel S. Randall was then the city superintendent of schools, with Henry Kiddle and Samuel W. Seton as his assistants.

Mr. Jones served as an assistant superintendent under superintendents Randall, Kiddle, and Jasper, during a period of thirty-five years. His entire connection with public education in this city extended over a period of more than forty years. It is an exceedingly rare occurrence that we have an opportunity to chronicle the continuance of anyone in the service of public education for so long a period. To have had such a service is a great honor.

In his retirement from this long and faithful service Mr. Jones carries with him the kind remembrances of his associates and of thousands of teachers; also their earnest wishes for his continued health and happiness.

THE JOURNAL is indebted to the editorial courtesy of the *Business Woman's Journal* for the Indian pictures which appear in our columns this week.

## Teachers Wanted.

MANUAL TRAINING.—Principal for Manual Training School wanted. Salary, \$2,500.

SCIENCES.—College position to teach Chemistry and Biology in the West. \$700.

MATHEMATICS.—Two private school positions. College men wanted. Elementary to advanced work. Salary, \$750 each.

ACADEMY.—Episcopalian College graduate wanted for academic work at \$800.

HIGH SCHOOL.—College woman wanted in Mo. at \$600.

PREPARATORY SCHOOL.—College man for Classics and conversational German at \$800; also lady (college graduate) for English department, \$600.

MUSIC.—A director (man) of a music department in Southern college. Salary, \$1,000.

MUSIC AND TELEGRAPHY.—A gentleman to lead cornet band and teach telegraphy.

CALISTHENICS AND GYMNASICS.—A director for city schools. Salary, \$1,000 to \$1,500.

Perhaps some of the above will suit you. Demand is steady now for teachers. Lack of space does not permit mentioning others. Write full particulars about yourself. If you know where there is or will be a vacancy it will pay you to write. Address H. S. Kellogg, 25 Clinton place, New York.



## Correspondence.

### Spelling Reform in Congress.

On January 11 the following resolution was introduced in the House of Representatives by Hon. Allen C. Duborow, of Chicago :

*Resolved by the House of Representatives (the Senate concurring). That the Public Printer be and is hereby directed in all works for Congress and for the departments begun after the passage of this resolution, to adopt the following rules for amended spellings, except in educational and other works where a different orthography may be required :*

First. Drop *ue* at the end of words like dialogue, catalogue, etc., where the preceding vowel is short. Thus spell *demagog*, *epilog*, *synagog*, etc. When the preceding vowel is long, as in prorogue, vogue, disemboque, retain final letters as at present.

Second. Drop final *e* in such words as definite, infinite, favorite, etc., when the preceding vowel is short. Thus spell *opposit* *preterit*, *hypocrit*, *requisit*, etc. When the preceding vowel is long, as in polite, finite, unite, etc., retain present forms unchanged.

Third. Drop final *te* in words like quartette, coquette, cigarette, etc. Thus spell *cigaret*, *rosst*, *epaulet*, *vedet*, *gazet*, etc.

Fourth. Drop final *me* in words like programme. Thus spell *program*, *oriflam*, *gram*, etc.

Fifth. Change *ph* to *f* in words like phantom, telegraph, phase, etc. Thus spell *alfabet*, *paragraf*, *filosofy*, *fonetic*, *fotograf*, etc.

Sixth. Substitute *r* for the diphthongs *ae* and *oe* when they have the sound of that letter. Thus spell *colian*, *ethetic*, *diarrhea*, *subpna*, *cofagus*, *atheneum*, etc.

N. B.—No change in proper names.

This resolution is in substance the same that was introduced into Congress at the last session. Owing to the tariff and other bills, which entirely engrossed the attention of the legislature, the resolution on Spelling Reform was not brought up for discussion. Friends of the movement, however, will make a vigorous effort to have the resolution acted on at the present session. To accomplish this, congressmen must know the will of their constituents. Persons willing to help in getting petitions signed, to be sent to members of Congress from their respective districts, are asked to communicate with Mr. Henry R. Boss, 232 Irving Avenue, Chicago, Ill., or with Spelling Reform Rooms, 24 Clinton Place, New York.

ELIZA B. BURNZ.

Would it be possible to make a tour through southern Europe. Spain, Italy, and Palestine in the summer months? Would the heat be too great for one brought up in a cold climate? What would be the cost of a trip to Liverpool and back for two persons? A. D.

A traveler going to southern Italy in July and August takes considerable risks. Rome is especially unhealthy in summer. Of course one accustomed to a cold climate would feel the heat a good deal. Excursion rates on steamers sailing to Liverpool vary from \$110 to \$300 (one person) according to room.

For other information teachers may continue to address, with stamp, Miss Alice M. Kellogg, 25 Clinton Place, New York.

*Editor of THE SCHOOL JOURNAL:*—Supt. Robertson of Chillicothe, Ill., asks who can beat his report for December. In reply I submit the following report for December :

No. enrolled	- - - - -	61
Average No. belonging	- - - - -	59.89
" daily attendance	- - - - -	59.55
Cases of tardiness	- - - - -	1
Percent. of attendance	- - - - -	99.43
" "punctuality	- - - - -	99.82
Average per cent.	- - - - -	99.62

#### FOR JANUARY.

No. enrolled	- - - - -	60
Average No. belonging	- - - - -	58.3
" daily attendance	- - - - -	57.6
Per cent. of "	- - - - -	98.79
" "punctuality	- - - - -	99.74
Average per cent.	- - - - -	99.26
Cases of tardiness	- - - - -	3

You will observe that we have tardiness in our school, and I do not know how it can be prevented. I do believe, however, that we have reduced tardiness to a minimum. I have two classes in which there has not been a case of tardiness this year (I mean school year). One of them has recorded a perfect attendance and punctuality to date, this year.

I cannot tell how I have secured this result. Several agencies have contributed to form the result. They take pride in their report. They recognize punctuality as a business principle.

Odebolt, Ia.

J. H. ORCUTT, Prin.

What induced Isabella, who was queen of Spain, to say that she would pledge her jewels, if need be, to carry out the project for Columbus. Was it from a weakness of the Spanish treasury or not?

Tallahassee.

J. W. J.

"Bryant's Popular History" says: "Queen Isabella was convinced by her Minister of Finance that the loss and shame to Spain would be great and irreparable if such an opportunity to add to her dominion and wealth, by the discovery of a short pas-

sage to India, should fall into the hands of another power." Another authority says: "There is no reason to suppose that the over-estimated queen ever did anything of the sort."

Give some suggestions as to the best methods of treating a young man, 18 years of age, who is obstinate and will not reproduce stories in language work.

N. C.

W. T. A.

Make him your friend outside of school, and the way to reach him will present itself. Another side of the young man will present itself to you in an association of a comrade nature, that will probably be a surprise to you.

If hot water be put into a glass jar, the jar will break; but if a spoon be put in the jar before putting the water in, it will not break; please explain the principle.

N. Y.

C. D.

Glass is a poor conductor of heat. When hot water is poured into a tumbler or jar, the bottom of which is much thicker than the sides, the expansion will be unequal, causing a strain which often results in the cracking of the tumbler, generally near the bottom. A glass beaker, made of even thin glass, will not break when boiling water is poured in because all parts of the glass expand alike and at the same time. Metal is a good conductor of heat. A spoon placed in the tumbler will quickly become hot when the water is poured into the glass. The heat thus withdrawn seems in many cases to reduce the temperature of the water just below the critical point at which the tumbler would crack. It certainly happens at times that a jar cracks in spite of the presence of a spoon, and again, glass will often stand the heat though no spoon be used. If care is taken to warm the glass first and to pour in the hot water gradually it will seldom crack.

G. G.

How shall I go to work to form a habit among my pupils of speaking good English. The home conversation and that of companions work strongly against all our attempts to give the teaching of language a prominence in school work.

S. M. F.

New Jersey.

A whole army of teachers are asking the same question and laboring under the same difficulties. Teaching written language alone will never make correct talkers of children. They must be taught to *speak* correctly. How? By never letting one incorrectly spoken sentence go unnoticed in the school-room. No matter what else has to go undone, be firm in the decision that if the child speaks at all it shall speak correctly. Children can be found in schools by the hundreds who *write* passable English and talk like heathens at recess. In the forgetfulness of play, the home and street dialect has full freedom. But there lies a concealed danger in this determination never to let the child speak incorrectly; for there may result a "nagging" habit in the teacher that will defeat her purpose. There are a good many ways to correct children without a direct attack. Their ear is not accustomed to correct forms of speech. Begin by familiarizing them with proper forms of expression. One good way is to write upon the blackboard, before school, a list of sentences in common use among children (correctly written of course), and let the school read them in concert before the regular exercises of the day commence. Whenever these sentences are incorrectly used through the day, attention may be called to it by simply pointing to the blackboard. There are many other ways of "working up" an interest in this matter which will come to the skilful, earnest teacher, on the spot, that cannot be prescribed beforehand.

Story telling by the children, in reproduction of a story read by the teacher, will give good results if the story teller is not allowed to proceed, after one mistake in language. All this must be done good-naturedly. Not a bit of use in trying to drive or scold a child into good English.

Please explain what is meant by an *ohm* and by an *ampere*. A boy came into my class the other day whose father is an electrical engineer, and who spoke of a dynamo being able to produce 1,000 volts.

EMMA FIELD.

New York.

It is not easy to give a clear explanation of the meaning of these terms unless something is known of electricity. You should examine a battery; there is one in every place where there is an electric bell. In most houses a battery is used called the Le Clanche pattern; this gives a force of 1½ volts. From this you may get some idea of what a volt is. The force of a current of electricity depends on the electrical force and on the conductor, just as the amount of water that runs through a pipe depends on the heat of water and the size of the pipe. A cell that will generate a force of one volt if it is sent through 250 feet of No. 16 copper wire gives a current whose strength is called an *ampere*. You will see that every current meets with resistance in going through a wire, or, in fact, through any conductor; the resistance in this 250 feet of No. 16 copper wire is called an *ohm*.

When you buy your spring medicine, get the best, which is Hood's Sarsaparilla.

## Important Events, &c.

Selected from OUR TIMES, published by E. L. Kellogg & Co.; price, 30c. a year.

### News Summary.

**FEBRUARY 4.**—The New York chamber of commerce decides to raise a subscription for the starving Russians.—Riots in the Mahdi's strongholds in the Soudan.

**FEBRUARY 5.**—The police guard still maintained around Minister Egan's house in Santiago.—The steamship *Venezuela* stranded on the Brigantine beach on the New Jersey coast.

**FEBRUARY 6.**—Election riots in Guatemala put down by government troops.

**FEBRUARY 7.**—Death of Rear Admiral Andrew Bryson (retired), U. S. navy.

**FEBRUARY 8.**—An Indian ship collides with a German steamer in the Suez canal.

**FEBRUARY 9.**—The Queen's speech read at the opening of the British house of commons.

**FEBRUARY 10.**—Four Spanish anarchists garroted.

### CHINESE REBELS SUBDUED.

The Chilean difficulty having been settled, the war vessels of the United States have been sent to another quarter of the globe where trouble exists. A popular excitement was reported at Ichang, on the Yang-tse-Kiang, one thousand miles from the sea, that threatened the revival of the anti-foreign riots. In addition to the seven vessels already in the Asiatic station, the *Baltimore*, *Bennington*, and *Yorktown*, may also be sent there.

The imperial forces recently routed the rebels in several places in the Northern provinces. The town of Pai Tse-Foo, the center of the old rebellion, was carried by storm, and Wong Ching and others were killed. At Hsia-Chang-Kao the rebels fled when the cannon of the imperial forces opened fire. Many of the rebel chiefs were killed on the field of battle. The uprising in the province of Kwei Chow has been subdued. The disturbance mentioned above, however, shows that the government's trouble is not yet over.

It is reported that the emperor of China has begun the study of the English language. Two students of the college in Peking have been detailed to instruct his Majesty, and the fact of their doing so has by royal decree been published throughout the length and breadth of the empire. This means that the Chinese feel that it is time to throw off their conservatism and adopt modern ways.

### WONDERFUL ASTRONOMICAL PHENOMENA.

**SUN SPOTS.**—On February 10, observations were secured of sun spots at Lick observatory, California, and elsewhere. According to the calculations, the disturbed area covers about 140,000 by about 100,000 miles. Two nuclei were found on the principal spot. Each of these has a diameter of about 14,000 miles, while the penumbra about the main spot had an extreme width of 65,000 miles. This spot could be viewed with a smoked glass.

**A NEW STAR.**—Spectroscopic copies have been taken of observations of the new star that lately appeared near Chi Auriga.

**RIVALED THE SUN IN BRIGHTNESS.**—It was reported from Lake Benton, Minn., that a wonderful display was observed there in the heavens at midday February 10. A brightly-luminous band encircled the zenith, extending from the sun on each side. Four large balls of light, almost as brilliant as the sun, hung at intervals on the circle, presenting the appearance of immense electric lights. Bright rainbows intersected the space within the circle. The weather was slightly hazy, though the sun shone brightly. The phenomenon continued more than an hour, when it gradually faded away.

### THE LOTTERY CONQUERED AT LAST.

For many years the Louisiana lottery has carried on its business, lowering the tone of public morals not only in the state in which it was located, but in every state in the Union, and gathering into its coffers the hard-earned money of the poor. The United States supreme court lately affirmed the constitutionality of the law excluding lottery advertisements from the mails. A few days after this the chief stockholder in the lottery in a letter addressed to the people of Louisiana declared that he would not accept a new charter for the company or continue the business under any conditions, because he wished to abide by the law. The principal reason, however, is that the sentiment of the better class of people is too strong against the institution to maintain it any longer. The managers also recognize that it is impossible to conduct such a business without the use of the mails. The con-

ditions that killed this lottery will prevent the establishment of another one in any part of the country.

### CHINESE IN SIBERIA.—RUSSIAN PLANS.

There is a reason for the Czar's great haste for the completion of the railroad across Siberia. For a long time it has been the policy of the Chinese government to encourage the emigration of its citizens across the border. No matter where the Chinese go they remain true in sentiment to their own country. One can see, therefore, what an advantage it would be to China in case of a war with Russia to have a large Chinese population on Siberian territory.

Upon the frontier of the Siberian provinces of Amoor and Ili, the most fertile of all, the hostility to the influx of Chinese of all classes is most marked. Several fights have occurred, and in each case a number of the Chinese were killed by the infuriated Russian peasants. The soldiers of the various imperial garrisons, although not taking an active part in these disturbances, are said to stand by and do nothing for the prevention of the attacks, and they are known when off duty to have assisted peasants in several riots in which Chinese were killed. Although Chinese have been employed in large numbers on the railroad the orders are to send them home at the expense of Russia as soon as their work is finished.

The railroad would be of great advantage in carrying troops and supplies in case of a war either in Europe or Asia. As it nears completion the aggressive Russian policy as regards Central Asia and China begins to assert itself, and its completion will probably be the signal for putting this policy into active operation. Already Russia's designs are apparent in the recently seized Pamir country, in Thibet, where she looks down upon India on one side and China on the other, and in Persia, whose northeastern territory she is even now ready to annex. The time for a true showing of her hand in Asiatic politics is rapidly nearing, and each spike driven and each rail laid on the trans-Siberian land brings her closer to her cherished object—of becoming the master of Central Asia, and, perhaps, of India or China.

### CHARLES H. SPURGEON'S DEATH.

Among the recent deaths is that of Charles H. Spurgeon, the great London preacher. He did not have a college education, but won his high place by strong natural ability. In figure he was short and chubby, and rather awkward than otherwise. His features had a round Saxon cast, such as would lead one to regard him as capable of a rude strength, of a dogged power of endurance. He spoke good idiomatic Saxon in the pulpit, such as the people could understand. Spurgeon had the faculty of making his lessons into pictures, as the pious mother and her sinning child, the distressed believer and his great enemy, etc. He had no doubt as to the truths of the Bible and the constant presence of God in the world. Winning his fame early, he died in his prime at the age of fifty-seven years.

**FATAL HOTEL FIRE.**—Early in February the Hotel Royal, corner of Sixth avenue and 40th street, New York, was burned and many persons lost their lives. An investigation shows that the means of escape in case of fire was scanty, and besides, that the building was in an unsafe condition. This disaster following so soon after the collapse of the building in Park Place indicates that the building inspection department in New York needs an overhauling.

**A STEAMSHIP STRANDED.**—The North German Lloyd steamship *Elder* became stranded near the English coast. There was a large amount of specie on board which was sent (Feb. 3) to Cowes on the *isle of Wight*. The sea was very violent, and the vessel lay on Artherfield reef in a very perilous position, but efforts were immediately begun to save her, with great hopes of success.

**A NOTED BANKER'S DEATH.**—John Jay Knox, formerly controller of the currency, died in New York recently. Mr. Knox was born of Scotch-Irish parentage in Oneida county, New York, in 1828. He early entered the banking business, and took a prominent part in the discussion which preceded the establishment of national banks. He strongly advocated a safe and convertible currency, the issue of a uniform series of circulating notes to all the banks, and the guarantee by the government of circulation secured by its own bonds. In 1870 he codified the mint and coinage laws. Mr. Knox was the author of a book on "United States Notes."

**OHIO'S OIL FIELDS.**—During the past six years there has been a remarkable development of the oil industry in northwestern Ohio. In that time 7,705 wells have been sunk. The present production is 48,000 barrels of oil daily.

**STILL LOOKING FOR A COALING STATION.**—The United States is



badly in need of a coaling station in the West Indies. St. Thomas would be the most desirable, but Denmark wanted \$7,500,000 for it when Mr. Seward tried to buy it, and would probably not take less for it now. It is not probable that, in the present straitened condition of the finances, Congress would be willing to appropriate that amount. The other two available points are the Mole St. Nicolas at the western end of the island of Haiti and Samana bay. Negotiations for these are being carried on by Minister Durham and Admiral Gherardi.

**EXHIBITION OF MEXICAN PRODUCTS.**—A plan is being carried out by some Mexican gentlemen for a permanent exhibition of products of that republic in New York city. A building in 43d street, corner of Lexington avenue, has been selected for the purpose. The expense of the enterprise will be shared by the twenty-seven Mexican states, and Pres. Diaz will give it his encouragement. A newspaper will be published daily in Spanish and English and lectures given on the various products.

**THE FRENCH TARIFF.**—Prices are rising rapidly in France as a result of the new tariff. Pork and mutton have advanced 2d. per pound. Italian and Dutch cheese has risen 100 per cent., and foreign soap 200 per cent. The extra cost to workmen for necessities of life is estimated at 1 franc (about 19 cents) a day.

**JAPANESE RAILWAYS.**—The government submitted to the diet a bill for the construction of new railway lines, the purchase of private lines, and for raising railway bonds. If the project is carried out Japan will have one of the most complete systems of railways in the world. The lines will be built mainly to strengthen trade and commerce, but their military importance will not be overlooked. The government intends to control the entire railway service of the empire, just as it does the telegraph and cable systems.

**A DECISION AGAINST LOTTERIES.**—The U. S. supreme court has affirmed the constitutionality of the act of Congress excluding newspapers having lottery advertisements from the mails. The court holds that Congress, acting under the provision of the constitution vesting in it the power to establish post offices and post roads, has the regulation of the entire postal system, with complete power to designate what may be carried in the mails, and what shall be excluded from them. It is held further that this does not abridge the freedom of the press because it does not interfere with the right to circulate and publish in other ways than through the mails.

**INSTRUCTIONS FOR MARINERS.**—The U. S. hydrographic office is doing a good work in publishing each month a chart and directions. The one issued early in February contained reliable facts concerning violent storms, wrecks, etc., that occurred during the preceding month. Descriptions of storms are written in many cases by masters of vessels that encountered them. Storm signals are displayed at eighty-two stations from Maine to Texas. Notice is also given of the formal adoption of the steamship "lanes" by the principal companies running between New York and ports of Northern Europe, and sailing vessels are cautioned to avoid using these tracks.

## Of Special Interest to Pupils.

### The Eskimo.

**THE ESKIMOS AND THEIR HOME.**—There is an idea that the Eskimo lives in the far north because he has been crowded out of more congenial climes. This is not true; he lives in the Arctic region because he is fitted for it and because he likes it. These people are perfectly contented there and when away long to return. From our point of view, their hardships are greatly increased in the winter, starvation frequently staring them in the face, yet they like that season best.

**HOW THEY LIVE.**—Certain of the Eskimos live in skin tents in the summer, but as winter approaches these become too cold. The early snow is not compact enough to build igloos, so they make ice houses. Slabs about six inches thick and the size of a house door are cut from a lake or stream; these are set upright on their ends, edge to edge, making a circular little pen over which the summer skin tent is lashed. The ice is so transparent that one on the outside can see the inmates walking around.

**THE IGLOO.**—When the polar gales and the low temperature have made the snow sufficiently compact the snow-house or igloo is built. This is nearer the shape of half an egg shell than any other object we can think of. The builder with himself as a center marks out an oval space with his snow-knife from eight to twelve feet across, according to the number of people who are to live in the house. This line represents where the blocks in the base of the house are to rest as soon as they are cut out of some neighboring snow-drift. The pieces are about the size of a large pillow and six or eight feet in thickness. There is only one course which leads spirally from the bottom to the top. The shape of the blocks therefore change from quadrangular to trapezoidal and finally to triangular at the top.

**INSIDE THE IGLOO.**—In the interior the workman makes a platform of snow, from fifteen to thirty inches high, that takes up fully two thirds of the space in the hut. On this platform the reindeer skins are spread, forming a bed. The door is cut on the south side, but is so small that in order to enter one must crawl on his hands and knees.

**HOW IGLOOS ARE HEATED AND VENTILATED.**—The snow of which these huts are made is not air-tight, by any means. It will admit air quite readily. This slow permeation of the walls by the air is depended upon mostly for ventilation. The only heat afforded is from the little stove lamps, over which the food is cooked and the skins dried. When the temperature gets too warm—that is, above the freezing point—the heat cuts a hole through the highest blocks and the cold air rushes in until the usual temperature is restored.

**ESKIMO TOOLS.**—The Eskimo never starts on his travels without a sword, shovel, and snow-knife. The snow-shovel is made of wooden boards sewed together with reindeer sinews. The handle is a piece of carved musk-ox horn. Snow-knives have long blades and a bone or wood handle long enough to grasp with both hands. Sometimes they use a saw, when they can get one of the whalers.

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## New Books.

A book that will meet the wants of a large class of teachers who wish to begin a systematic study of education is *The History and Science of Education*, by William J. Shoup, M. S. In the 303 pages in this volume the author has given the main facts of the subject. In selecting the material he has used great discrimination and he has presented it in attractive shape. Part I. treats of the development of the mental and moral faculties, the kindergarten and how it may be made serviceable to the ordinary school, object lessons, stages of intellectual development, the moral faculties and their cultivation, etc. In Part II. is included a brief account of the different theories of education, and the chief movements in the different ages, from the earliest historical times to the present. Each chapter is followed by an analysis and questions relating to the topics considered therein. The book is clearly written and unencumbered by useless matter. Young teachers especially would do well place it in their libraries. (American Book Company, New York, Cincinnati and Chicago. \$1.00.)

Very few men dying at the age of thirty-two have achieved a world-wide and enduring fame. This, however, was accomplished by *Sir Philip Sidney*, the graceful prose writer and poet, the chivalrous knight, the successful ambassador, the favorite of Queen Elizabeth, the man of high honor and generosity. The life of this man, whose name has become a synonym for unselfishness, is the subject of the volume contributed to the Heroes of the Nations series, by H. R. Fox Bourne. It is partly based on the author's memoir of Sir Philip, published in 1862, but contains in addition the results of the researches of others since that time. The main facts of Sidney's career in all its varied relations are well set forth. In order not to overstep the bounds set for the work (and to maintain the proportion) many minor, though interesting, details have been omitted. The period in which Sidney lived is one of the most interesting in English history and his name is dear to all branches of the English race. Therefore this biography, giving so just an estimate of his character and career, will be in great demand. The volume is a fine specimen of the bookmaker's art. The same care was devoted to the illustrations, typography, printing, and binding that has been noted in the other volumes of the series. (G. P. Putnam's Sons, New York and London. \$1.50.)

There has appeared lately a historical chart giving chronological lists of the famous men of the past six centuries in literature, philosophy, religious thought, science, invention, and discovery; painting, sculpture, architecture, and kindred arts; and music. It answers the questions, *Who? When? What?* Red perpendicular lines mark off the decades and black ones the centuries, while red horizontal lines indicate when and how long each man whose name is recorded lived. Great discoveries and inventions are also given, as well as many events whose influence was far-reaching. The chart is accompanied by a pamphlet giving alphabetical lists in each department of the persons mentioned. Much history could be learned in a short time by the study of this chart. By it the pupil will get an idea of the proper relations of events. If it were framed and hung on the wall of a school-room it would be a source of unending interest and profit to the children. (A. Lovell & Co., New York.)

Geography taught in the dry text-book fashion is decidedly uninteresting, and it is no wonder that pupils are heard frequently to say, "I hate geography." But there is a way of making it one of the most fascinating of school studies. To have the child learn about the earth and its people all that he should, the teacher ought to know a great deal about the subject. As an aid to teachers mainly, *How to Teach and Study Geography* (Brace system) has been prepared by County Supt. John M. Boyer and John F. Wicks. Its plan is to draw out what knowledge the pupil possesses and to add more to it. There are outlines of different countries for the blackboard, suggestive key-words as indicators of supplementary work to be done by pupils in reference books,

questions calculated to excite thought, items of interest about people and places, review topics, sketches of important localities, and tracing lessons and trips. If the teacher will use these and other helps intelligently there is no reason why the class should not look forward to the geography lesson with the same interest that they would to the perusal of a fairy story or a novel. (A. Flanagan, Chicago. 50 cents.)

*The Proceedings of the National Educational Association* for 1891 at Toronto, have recently been issued in a large octavo volume of 881 pages. It is scarcely necessary to speak of the value of this collection of addresses and papers to all who wish to keep informed of the educational movements of the day. The daily press, however full the reports, cannot do justice to such a meeting as the National Association. In this volume, therefore, we have the first full and accurate report of that gathering in which teachers of all grades will find something for them. The volume also contains the constitution of the association, lists of officers, life directors, life members and annual members. For the report of the committee on necrology, Dr. E. O. Lyte prepared a memoir of ex-President J. P. Wickersham, and a memorial of Dr. John Hancock was contributed by Dr. E. E. White. (Published by the association, E. H. Cook, Flushing, N. Y., president; press of J. J. Little & Co., Astor Place, New York.)

Those who wish to take up the study of Italian will find in C. H. Grandgent's *Italian Composition* a very convenient text-book. It is intended to give a practical and easy course in the rudiments of the language accompanied by abundant exercises. Part I. has a course of twenty lessons in the elementary principles of the language and twenty exercises illustrating them; Part II. fifteen paragraphs of simple Italian, each of which is followed by an exercise based upon it, and Part III. fifteen additional exercises in composition, and a number of formulas used in letter writing. There is a brief chapter on Italian sounds, and an appendix containing some additional notes on pronunciation and a list of irregular verbs. The book is one of Heath's Modern Language series of text-books, which have everywhere won such well-merited popularity. (D. C. Heath & Co., Boston. 65 cents.)

Many of the world-renowned classics cannot be enjoyed by the great mass of readers because they are locked up in a foreign language. Of late years the number of excellent translations of Greek and Latin works has greatly increased. One of the latest is Frances Younghusband's translation from the German of Prof. C. Witt's version of *The Retreat of the Ten Thousand*. This puts in the reach of all Xenophon's matchless narrative, in which it has been said there is not a dull page. The volume is bound in blue cloth and is made very attractive by numerous illustrations of Asiatic scenes, ruins, etc. There is a map showing the route of the famous retreat. (Longmans, Green & Co., London and New York.)

Mrs. Sara E. H. Lockwood is the author of *An English Grammar* adapted from "Essentials of English Grammar," by Prof. W. D. Whitney, of Yale university, with new arrangement and additional exercises suitable for younger pupils. Certainly there is no higher authority in language than Professor Whitney and an adaptation of his work by an experienced hand must prove valuable. The learning of grammatical rules without accompanying exercises is practically a waste of time. The author of this book gives an abundance of exercises to show what is correct and the different forms of which language is capable, with the rules by which the reason for each step is learned. The combination of theory with practice as given in this volume if employed by an intelligent teacher will, without doubt, make correct writers and speakers. (Ginn & Co. 80 cents.)

*Vick's Floral Guide* for 1892 has appeared, and is as attractive as usual with its many colored illustrations. It is an exceedingly valuable publication for the agriculturist or florist. (James Vick's Sons, Rochester, N. Y.)

(For Literary Notes and Magazines see narrow column on page 197.)

### JAMES'S PSYCHOLOGY—BRIEFER COURSE.

Imo. 478 pp. Teachers' price, \$1.00; by mail, \$1.74. Competent critics generally agree in pronouncing Prof. James's "Principles of Psychology" (2 vols. 8vo. Teachers' price, \$4.50; by mail, \$5.52. Retail, \$6.00.) "the most important contribution that has been made to the subject in many years" (Nation). This briefer course is partly an abridgment of the larger work and partly a re-writing, two-fifths of the matter being new. It is a working text-book, and judiciously used, it is probably not too difficult for any high school class that can with advantage study the subject at all.

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